Amendments to the Drawings:

The attached sheets of drawings include changes to figure 5A. The replacement sheet replaces the original sheet which includes figure 5A. In figure 5A, reference numeral 562, which previously designated a beam splitter, is being changed to 563 (and appropriate correction is being made to the specification) to avoid duplication with Electrical Stimulus Unit 562. No new matter is being added by the present amendment.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

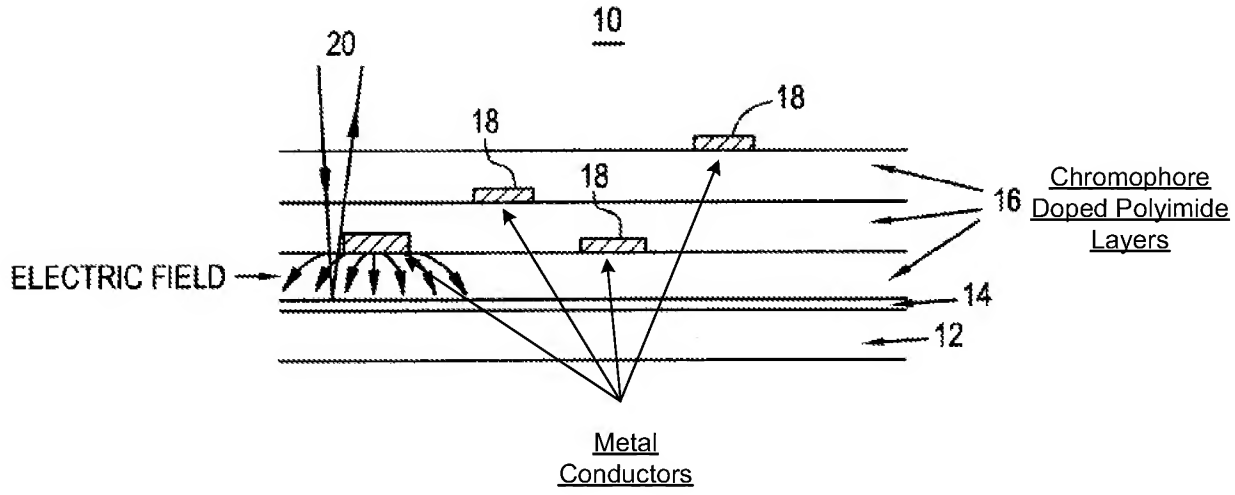
Paragraphs 3, 8, 11-12, 18, 23-24, 28-31, 33-44, 47, 49 and 51-52 have been amended for clarity and to correct minor typographical errors. Amendments to claim 26 are supported in the specification as filed, for example at paragraph 36 and figures 4A-4C. Various other amendments have been made to the claims for clarity and to correct minor typographical errors.

No new matter is being added by any of the present amendments.

Claims 26-28, 30, 34 and 36 are patentable over Charles et al. (US 6,271,671) in view of Alumot et al. (US 5,699,447).

Claim 26, as amended, recites among other things, "wherein (i) the electro-optically active layer coats only a top surface of the test structure". At least this feature of claim 26 is not taught or suggested by the cited combination of references.

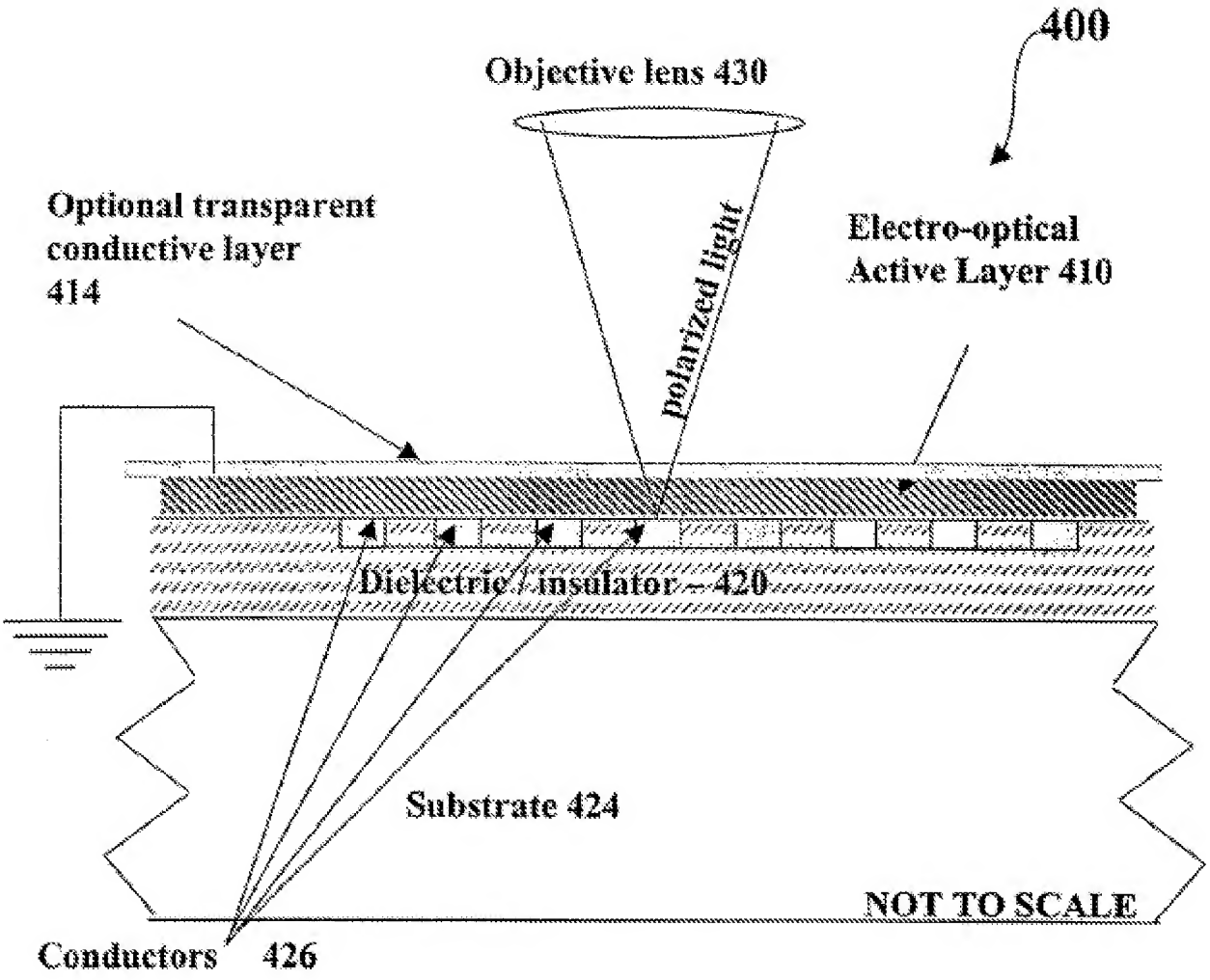
In Charles, for the sake of argument, assume metal conductors 18 may be interpreted as test structures, and chromophore doped poyimide layers 16 may be interpreted as electro-optically active layers. If this is so, figure 1 of Charles (annotated below) depicts three metal conductors being enveloped by chromophore doped poyimide, and one metal conductor resting upon a chromophore doped poyimide layer.



(Figure 1 of Charles, annotated version)

This configuration fails to exhibit or suggest the feature of an electro-optically active layer coating only a top surface of a test structure, as recited in claim 1. Similar observations hold for figures 3-4 of Charles.

To provide contrast with the teachings of Charles, figure 4A of the instant application has been copied below, depicting an electro-optically active layer coating only a top surface of a test structure.



(Figure 4A of the Instant Application)

For at least the foregoing reasons, claim 26 and its dependent claims are patentable over Charles.

Alumot is cited for teaching a processor that generates and processes images. Even if this is so, Alumot fails to cure the above-mentioned deficiencies of Charles. Therefore, claim 26 and its dependent claims remain patentable over Charles, even in view of Alumot.

Claim 35 is patentable over Charles in view of Alumot and *Explore the Lock-In Amplifier* by EG&G Princeton Applied Research (hereinafter, "the EG&G publication").

The EG&G publication is cited for teaching certain features of dependent claim 35. Even if this is so, the EG&G publication fails to cure the above-mentioned deficiencies of Charles and Alumot. Therefore, claim 35 remains patentable over Charles and Alumot, even in view of the EG&G publication.

For at least the foregoing reasons, the present claims are patentable over the cited references. If there are any additional fees due in connection with this communication, please charge Deposit Account No. 19-3140.

Respectfully submitted,

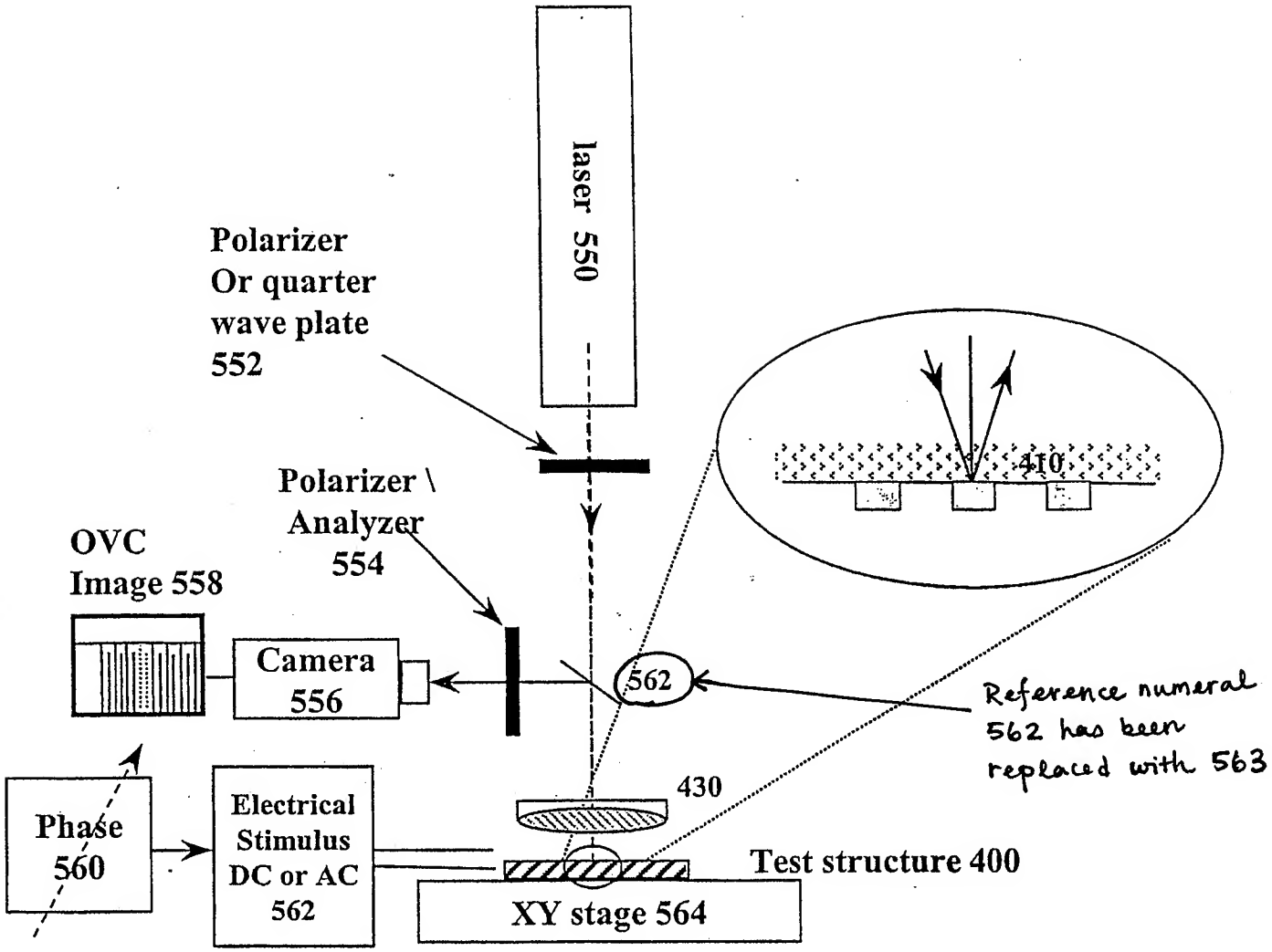
Dated: February 2, 2011

/Tarek N. Fahmi/
Tarek N. Fahmi
Reg. No. 41,402

SNR Denton US LLP
P.O. 061080
Wacker Drive Station, Willis Tower
Chicago, Illinois 60606-1080
(650) 798-0320

APPENDIX

Appl. No. 10/530,157
Reply to Office Action dated Dec. 2, 2010
Annotated Sheet



500

FIG. 5A.